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ABSTRACT

The increasing diversity of students in today's schools has led to much categorization and labeling and to a set of fragmented categorical programs. While in principle an inclusive school system should provide for the diverse needs of all students, in practice a disjointed and separatist system for special students continues to be the norm. Concerns about student placement in special education programs were reflected in the standard proposed by the National Academy of Sciences (NAS), which found little value in the programs and classification schemes it reviewed in 1980. The NAS proposed an Aptitude Treatment Interaction standard based on instruction for classification that stated that there must be evidence that some students have characteristics that make one program desirable for them while others benefit more from different approaches. Research has indicated that present methods of classification are inadequate, and that the two-step process of determination of entitlement and analysis of educational needs is basically flawed. For moderate learning improvements among students with special needs, it is best to avoid special placements. For extraordinary improvements for all children, educationally effective practices that focus directly on classrooms and homes should be employed. (Contains 1 figure, 2 tables, and 30 references.) (SLD)

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What Works and What Doesn't Work: The Case for an Inclusive System

by M.C. Wang, M.C. Reynolds, & H.J. Walberg

The National Center on
Education in the Inner Cities

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The increasing diversity of students in today's schools has led to much categorization and labeling and to a set of fragmented categorical programs. In principle, an inclusive school system should provide for the diverse needs of all students, including those requiring special, remedial, or compensatory education. In practice, however, a disjointed and separatist second system for special students has developed and continues to be the norm.

These separations take place under many names: special classes, special schools, resource rooms, suspensions, expulsions, ability grouping, transition classes, and time-out rooms. Demeaning labels such as "retarded" and "disturbed" are sometimes used to rationalize placement practices. Studies of these second-system programs generally place them on the "doesn't work" side of the dichotomy suggested by our title. In this chapter, we briefly describe the problem, review what "doesn't work," and then discuss "what works" in enhancing learning and making schools both inclusive and effective for all students.

THE PROBLEM

Imagine this situation in a large elementary school.

The principal has proposed that all the specialists join with the general staff of the building to try a coordinated approach to serving children who have special needs. One out of five teachers in the building now works in categorical programs, mostly in separate classrooms. Part-time staff (e.g., a school psychologist, a social worker, a vision specialist, an English as a Second Language supervisor, most teachers' aides) also commonly serve in categorical programs.

A growing number of children are being referred to the principal's office. On a typical day, the principal may be confronted with a variety of problems to which categorical programs either do not or are not "allowed" to respond. They may include the following instances:

- a fourth-grade boy who is struggling unsuccessfully in academics and who runs away from the school;
- a fifth grader who pridefully brings live ammunition to school to show to his classmates;
- several students who come to school only occasionally and refuse (or do not know how) to do assigned work;
- a fifth-grade student who needs to go home regularly to feed her two-month-old baby;

- a pregnant sixth-grade student for whom arrangements must be made for regular visits to the health clinic to ensure that proper prenatal care is provided; and

- a third-grade girl who is far behind her classmates in learning and inconsistent in taking her anticonvulsant medication.

Teachers of primary grades report that many children who need intensive help in language and reading do not qualify for the learning disability (LD) program (designed for children showing a wide "discrepancy" between "ability" and "achievement") or the Chapter 1 program (limited to students who have a sufficient number of eligibility "points" according to an increasingly selective statewide eligibility system). The migrant education program is designed to serve only children whose parents have recently moved to secure agricultural employment. There are no provisions for serving poorly motivated children, those under stress from family problems, or those suffering neglect and abuse.

The local chapter of the Urban League has approached the school superintendent with complaints about the wide use of IQ tests and the frequent labeling of African-American children as retarded or emotionally disturbed. Finally, an upcoming visit by federal and state monitors has teachers upset about an abundance of paperwork they consider useless.

Many schools are better coordinated and under less stress than the one described above, but many are not; the latter find themselves in a losing battle with "disjointed incrementalism" (Reynolds & Wang, 1983, p. 191). This term refers to the launching of a series of narrowly framed programs (each justified in its own time and way, but based on the false assumption that it will not affect the others) one by one, over time. Each program has its own eligibility, accountability, funding, and advocacy systems, which results in a complex set of separate programs and a costly pupil allocation system or, simply put, excessive "proceduralism" (Gartner & Lipsky, 1987).

All too often, procedural requirements overshadow attention to educational substance and learning progress. And, too often, this "obsession with process has allowed us to ignore dramatic inequalities in substantial outcome" (Haney, 1991, p. 194). Regrettably, program monitoring often focuses more on what goes into filing cabinets than on what goes on in classrooms. Furthermore, this procedural emphasis stands in sharp contrast to new calls by policymakers for clear evidence of learning progress. Meeting these new, outcome-oriented expectations is a challenge to educators associated with categorical programs.

THE STANDARD OF THE NATIONAL ACADEMY OF SCIENCES

How should we judge this highly segmented organization of school operations? When are special programs justified? One answer was provided by a panel of experts appointed in the early 1980s by the National Academy of Sciences (NAS). At the outset, the concerns of the NAS Panel were the racial and gender disparities in the placement of children in special education programs; the panel's attention shifted, however, to the quality of such programs. If programs had demonstrated clear and positive results in student learning, there would have been little concern for high rates of student assignment to them. But the panel ultimately found little value in the programs and classification schemes (Heller, Holtzman, & Messick, 1982).

Referring to educable mental retardation (EMR), learning disability, and Chapter 1 programs, the panel reported: "We find no justification for the current categorization system that separates these three groups in the schools" (Heller, Holtzman, & Messick, 1982, p. 102). The panel added, "We can find little empirical justification for categorical labeling that discriminates mildly mentally retarded children from other children with academic difficulties" (p. 87). Further, "Similar instructional processes appear to be effective with EMR, learning disabled, and compensatory educational populations" (p. 102).

To address these deficiencies, the panel proposed the following standard for a school classification and placement system: "It is the responsibility of the placement team that labels and places a child in a special program to demonstrate that any differential label used is related to a distinctive prescription for educational practices . . . that lead to improved outcomes" (p. 94). Adherence to this standard would have profound effects in the schools and in many related activities.

The NAS approach to classification focuses on instruction; it proposes educational classifications. In technical terms, the NAS panel proposed an Aptitude Treatment Interaction (ATI) standard for classification, i.e., there must be evidence that, in considering alternative programs, some students have

characteristics that make one alternative program desirable for them while other students profit more from different approaches. If this cannot be shown, then students should remain in regular classrooms.

WHAT DOESN'T WORK

Spurious Classification

In the past decade, several major studies and syntheses of research have shown that children in special education and other categorical programs, such as Chapter 1 and migrant education, are being classified in dubious ways. Ysseldyke et al. (1983) reported that as many as 80% of all children could be classified as learning disabled by one or more of the procedures now in use in the nation's schools. Even if they were reliable or correct in some other limited way, many classifications are irrelevant to educational decisions. For example, there is no separate knowledge base for teaching reading to LD as opposed to Chapter 1 students.

In a research review directed primarily to Chapter 1 programs but with attention also to special education programs, Brophy (1986) concluded that there was no evidence of need for different kinds of instruction in these programs. He found only ordinal Aptitude Treatment Interactions (ATIs), not disordinal ones, which suggests that students who fall behind in their learning often need more, but not necessarily different, instruction than other students. Haynes and Jenkins (1986) and their associates at the University of Washington have demonstrated in a series of studies that students in Chapter 1 and LD programs show substantial overlap in characteristics. Furthermore, they actually tend to receive "less" instruction when assigned to these specially developed programs, even though the initial purpose was to provide extended and intensive instructional support (Allington & Johnston, 1986).

Thus, in the case of the two categories serving the largest numbers of students (Chapter 1 and LD), research does not show the distinctiveness required by the NAS standard. Our own summary of research, which involved scholars from across the nation and covered research in most areas of special

education through the late 1980s, fully accords with the Brophy and NAS observations of no disordinal ATIs (Wang, Reynolds, & Walberg, 1987-1991). We do acknowledge, however, that students who are blind need uncommon approaches to instruction in reading and mobility, and that those who are deaf require specialized approaches to communication (i.e., some ATI's "work" and are necessary).

Moreover, recent reviews reveal a number of specific scientific and practical flaws in classifying students for special programs. First, procedures for classification and placement of children in special programs are often unreliable. A child may be classified as handicapped by one test or diagnostician and nonhandicapped by another. Even a single diagnostician, working from an identical case record on two separate occasions, might produce two different diagnoses and classifications. These unreliable procedures lead to wide variations in rates of classification from state to state:

> Discrepancies in state eligibility have resulted in large disparities among states in the percentages of students classified as educable mentally retarded (from 0.49% in Alaska to 4.14% in Alabama); learning disabled (from 0.83% in New York to 5.20% in Maryland); and emotionally disturbed (from 0.04% in Mississippi to 3.09% in Utah). (Morsink, Thomas, & Smith-Davis, 1987, p. 288)

Second, diagnostic procedures can be extremely time-consuming and costly, requiring the services of specially trained personnel; the time, energy, and other resources directed into diagnosis and classification are drawn away from instruction. A particularly acute problem is that much of school psychologists' time has been consumed in simple psychometrics, just to make categorical program allocation decisions. As a result, psychology in its broader versions is largely undelivered in the schools. To the extent that diagnostic procedures are complicated by bureaucratic and legalistic procedures, they consume even more resources that could be channeled into direct educational services for children.

Third, some classifications cause needless labeling and stereotyping. Children are often treated differently simply because they have been labeled. For example, teachers and parents may have unwarranted lower expectations of children classified as retarded or learning disabled. In addition, children may lose self-confidence when they have been stigmatized by labels and removed from regular

classes. Finally, Keogh (1988) notes that classifications depend, at least in part, upon data which are unrelated to educational needs:

> Decisions about special education classification are not only functions of child characteristics but also involve powerful organizational influences. Number of programs, availability of space, incentives for identification, range and kind of competing programs and services, number of professionals, and federal, state, and community pressures all affect classification decisions. (p. 237)

Such classifications fall far short of the NAS standard.

There appears to be a kind of hydraulic relationship across classification categories. A major court decision, for example, may cause a downturn in the use of one category and an upswing in another. Reschly (1987) pointed to a decline of 300,000 in the number of students classified as mentally retarded from 1976 to 1983, contrasting with an increase of over one million in the number classified as LD.

Concerns about classification, student placement, and quality of instruction in categorical programs are not new, nor are they confined to the field of special education. Several major, systematic reviews of classification and placement procedures provide evidence that present methods are inadequate (Reynolds, Wang, & Walberg, 1987; Williams, Richmond, & Mason, 1986). Often they lead to expensive, segregative treatments that do not improve children's learning.

The "Two-Step" Policy and Process

The difficulties in classification result largely from what might be termed the "two-step" identification procedure. When a student has learning difficulties or behavior problems, it is common for the teacher to make a referral for placement into categorical programs. The referral leads into the two-step process.

The First Step. The first step is to determine whether the child falls into a particular class of "entitled" students. Usually, this step is unrelated to educational needs, at least in any direct way. For a student to receive special education services, for example, it must first be determined that the student is handicapped. This usually involves classification of the student according to one of eight or nine

different categories. This first step in categorical classification consumes an extraordinary amount of the time and resources of professional staff. Reschly (1987) writes: "The amount of time and energy now devoted to preplacement and reevaluations [in special education], which are dominated by determination of eligibility, represents [an] excessively costly and ineffective use of resources" (p. 51).

The categories are assumed (spuriously, in most cases) to be context-free; that is, it is assumed that the child could as well be studied in a hospital or psychological clinic as in the school and be labeled as mentally retarded or emotionally disturbed, etc. In migrant education, the first step in assessing a child's eligibility for special programs is a determination of parental work status.

The organization of categorical programs often follows the first-step classification approach. For example, special classes are organized for Chapter 1 students or for those labeled retarded, learning disabled, or emotionally disturbed. Similarly, teacher preparation and licensing often follow the same categorical bases, as do advocacy groups and as does much of the literature.

The categories, especially those with the most negative connotations (such as mentally retarded), tend to be highly correlated with race and socioeconomic levels. Students are referred to such programs through what might be called "rejection-oriented" practices. This tendency breeds resentment that sometimes escalates into controversies only resolved through litigation; such situations are detrimental to student, family, and school alike.

The prevailing first-step classification approaches generally "don't work" in the schools; they should be radically revised. Most of the categories assume an underlying taxonomy unsupported by any consensus of research or theory. The concept of mental retardation, for example, has been stretched to include the so-called "educable" or mild range, and millions of children have been labeled mentally retarded based on tests lacking sufficient reliability or validity for decisions about instruction or school placement. Similarly, the mental illness label has been extended to relatively common behavior problems. To be sure, there are children with severe emotional and behavioral problems who require special

treatment, but typological classification concepts have been extended far beyond what scientific evidence would suggest is prudent. Unfortunately, these extended classification tendencies have grown substantially in recent decades.

It is true, of course, that policymakers may legislate in terms of whatever categories they choose. For example, if they observe that many children in families of migrant workers show learning problems (i.e., the base or group rate for achievement is low), they may advance a program for children of this class. It remains for educators, however, to work with policymakers on how to address their legitimate concerns and then to organize programs without creating an incoherent school situation and assigning degrading labels to children. Indeed, there is important work to be done in the political arena to secure revisions in present "don't work" activities.

The Second Step. The second step involves an analysis of educational needs and the specific planning of an educational program and related services. Only when the step one entitlement is clear and step two results in a determination that "special" needs exist is a special placement made. Categorical funds tend to flow to the local school district as soon as the two-step process is complete. Significantly, the conditions triggering money flow are all on the input side. It matters not, as far as funding is concerned, whether the special program produces good outcomes.

We believe that the two-step process as described here is basically flawed; it should be changed to give emphasis to outcome data and to link funding patterns to learning outcomes and to policies concerning the "least restrictive environment" principle. We find the first step of categorizing children to be largely demeaning and unnecessary, and the use of "context-free" designations for categories of children to be mostly inappropriate as well. It is possible to design and operate school programs that attend to special problems of children using only data that are relevant to instruction.

WHAT WORKS: A KNOWLEDGE BASE ON EFFECTIVE PRACTICES

Much research has been conducted over the past half century on what yields better learning. This research deserves close attention by policymakers and educators as school programs are revised to better serve children. To summarize our conclusions, two policies are in order:

- For moderate learning improvements among children with special needs, avoid special placements. Instead, nearly all children with special needs should be integrated with "ordinary" children in regular classrooms.
- For extraordinary improvements for all children, employ educationally effective practices that focus directly on classrooms and homes, where learning takes place.

A Synthesis of Effective Practices

Findings from a recently compiled, large-scale research synthesis on the influences of educational conditions, policies, and practices on academic learning suggest a consistently strong influence of proximal psychological variables (Wang, Haertel, & Walberg, 1993). By comparison, the "macro-level" policies (concerning administrative, financial, and organizational arrangements of states, districts, and schools) that have preoccupied reformers for the past decade show little relative influence.

Briefly, the synthesis focused on alterable variables, i.e., conditions that can change in ways that enhance learning. Using a six-category conceptual framework of leading influences (Wang, Haertel, & Walberg, 1990), a total of 228 variables were identified as the basis for the synthesis study. Variables that are static or largely impervious to the influence of teachers, such as chronological age and socioeconomic status, were not considered, nor was literature in highly distinct fields such as education of students who are blind or deaf, treatment of major psychiatric disorders, therapy for speech disorders, or education of students with severe and profound disabilities. Table 1 identifies the six major categories and further lists 28 subcategories that are representative of the total pool of 228 variables.

The synthesis was comprised of findings from three data sources: (a) content analyses of 179 authoritative reviews; (b) a compilation of effect sizes from 91 "meta-analysis" studies of learning effects;

and (c) a survey of expert opinion on learning. More specifically, from the content analyses, some 10,000 detailed ratings were made of the strength of relationship between learning and each of the 228 variables as represented in the voluminous set of review articles and chapters. In addition, based on findings from the analysis reported in the 91 meta-analysis studies of the effect sizes, numerical summaries addressing the effects of the 228 variables were compiled. Expert opinions on influential variables of learning, the third data source, were based on ratings from a survey of the relative influences of the 228 variables. The survey respondents included educational researchers, school psychologists, state directors of Chapter 1 and special education, principals, and general and special education teachers.

Findings from these three data sources were in substantial agreement on the relative influences of the variables. The strong influence of proximal psychological variables, which directly affect learners in their classrooms and homes, is illustrated in Figure 1. The lengths of the bars in Figure 1 show the relative influences of the 228 variables on learning averaged into 28 categories. The numbers are the equally weighted averages of the content ratings, the effect sizes, and the experts' ratings. They have been standardized to T-scores, which have a mean of 50 and a standard deviation of 10. Thus, effects above 55, for example, can be considered relatively high, and those below 45 can be considered low.

It is of interest to note that rankings of the relative influences of the variables derived from the survey ratings by respondents in the various professional roles (i.e., educational researchers, school psychologists, state directors of Chapter 1 and special education, principals, and general and special education teachers) were remarkably consistent. The median correlation among groups in their ratings of items was .88. The correlation of mean ratings by general and special education teachers, for example, was .95, the highest correlation observed. The lowest correlation (.77) was between educational researchers and special education directors (Reynolds, Wang, & Walberg, 1992).

The consistency in what was considered influential in learning across the different professional role groups further supports the validity of an inclusive approach to instructional effectiveness. What <u>every</u>

student needs is powerful, state-of-the-art education programs that are based on what we know that works in the service of children. An illustration of this knowledge base is shown in Table 2. It lists the 45 variables that received the highest average ratings (at or above 2.7 out of a 3.0 scale) from the survey of expert opinions among educational professionals. Taken together, they form a considerable knowledge base on what works in enhancing student learning as judged by educational professionals. The variables and their influence rankings can serve as a basis for specifying the curriculum of teacher preparation programs (both preservice and inservice). They can also aid in arranging instruction in ways to achieve learning outcomes for all students, including those with special needs or otherwise considered at risk.

Outcome Data on Special Programs

With respect to the second aspect of the NAS standard for special classifications and placements, concerned with the value of programs, evidence on the effects of categorical programs is ambiguous at best. For example, in a prominent review of efficacy research on the education of children classified as learning disabled, Keogh (1990) characterized the overall findings as "equivocal . . . . Based on the evidence to date, generalizations about effectiveness of these interventions for learning disabilities are limited" (p. 130).

Similarly, 180 studies of learning disabled methods such as perceptual motor training showed essentially no effect (Kavale, 1987). In a broad review, it was found that "there is an absence of a conclusive body of evidence which confirms that special education services appreciably enhance the academic and/or social accomplishments of handicapped children beyond what can be expected without special education" (Semmel, Gottlieb, & Robinson, 1979, p. 267).

The field of special education has so far failed to provide impressive data concerning merits of its own programs. For example, the so-called "efficacy studies" concerning special classes for students who are mentally retarded, which usually involved comparing measured educational outcomes for comparable students in special education and in regular classes, have had equivocal outcomes (cf. Gartner

& Lipsky, 1987). Furthermore, recent meta-analytic studies offer little more convincing evidence of positive outcomes of special education services that are provided in self-contained (segregated) special education programs (Wang & Baker, 1986).

Schools often contribute to children's learning problems. There is evidence of the so-called Matthew effects (Stanovitch, 1987). Students who show limited progress in early phases of instruction in basic subjects, such as reading, tend to show progressive retardation over succeeding years. The data on the returning rate, that is, students' exit from special education after being placed in special education programs, has been embarrassingly low. Based on the findings from a nationwide study of special education in major cities sponsored by the Council of the Great City Schools (Buttram & Kershner, 1988), the student exit rate to regular classes in the school districts that participated in the study for the particular year studied ranged from 0 to 8.8%. (These figures include students from kindergarten to twelfth grade.) This finding suggests that once students are placed in special education programs, they are unlikely to return to regular classrooms.

Broadly framed evaluation studies are, of course, very difficult to conduct with precision. It seems quite clear that many special education programs for distinctly and severely disabled students are beneficial. Indeed, in cases of severe disability, special education programs often represent the only opportunity available for education and are widely appreciated. Whether programs for mildly disabled pupils that involve separation from regular classes and schools are distinctly beneficial for students is in doubt and a cause of widespread debate.

In a study using the number of "days to learn" to various levels, there was no evidence of such acceleration; instead, compared with others, pupils in categorical programs showed steadily decreasing rates of progress through the curriculum in reading and arithmetic (Reynolds, Heistad, Peterson, & Dehli, 1992). Several recent reports have suggested that such lack of effects of categorical programs, such as

Chapter 1, are the result of the programs being targeted too narrowly on basic skills and neglectful of more complex elements of a modern school curriculum (cf. Commission on Chapter 1, 1992).

IMPLICATIONS FOR IMPROVING LEARNING

There is a new call for educators to give priority to outcomes over processes and results over procedures. The demand is not restricted to the high, middle, or low sections of the student ability distribution, nor to the categorical programs; the intent is to raise the entire spectrum of achievement.

Clearly, local, state, and national leaders as well as the public want greater effectiveness from the nation's schools and reliable, tangible measures showing improved results. Policymakers have increasingly adopted results-oriented programs and evaluation methods. Whereas in the past they might have looked to spending or class size, which were thought to influence progress, policymakers have increasingly demanded the use of solid assessment procedures to demonstrate actual progress.

Many programs currently serving students identified as requiring "special" education and related services support (e.g., Chapter 1, special education, and other compensatory and remedial categorical programs) would profit from rigorous improvement efforts organized around principles identified as important for learning. Resources can be redirected to such efforts if we revise categorical approaches to instruction. Improvements on several other fronts are both possible and necessary; they are briefly discussed in the following sections.

The Merging of the Two Current Systems of Education

An inclusive approach to student diversity is justified by the high degree of agreement among special education and general classroom teachers about which variables or principles of instruction are most important in their work; research reviews and meta-analyses also support their views. This finding suggests a shared knowledge base on addressing the learning needs of all students, including those who require greater-than-usual instructional support. Furthermore, this knowledge--based on what works--

suggests much overlap and potential merging in the preparation of special education and general classroom teachers in colleges and universities. Similarly, inservice education for special education and regular teachers can be carried out as a joint professional venture with emphasis on shared or common principles of pedagogy.

Policy Revisions

On the policy front, we propose changes that support integrated forms of education for students who are currently segregated for service in the various special, remedial, and compensatory education programs. To this end, innovative approaches toward integrated forms of education for students should be encouraged and supported through policy revisions on a "waiver for performance" strategy. Under such a plan, local agencies might seek and be given waivers of existing rules and regulations when they advance ideas for integrated programs and offer to provide evidence of outcomes. Though flexible interpretation of existing rules and regulations may be somewhat facilitative, policy changes or waivers would more likely lead to systemic changes--although it will be necessary to ensure that when waiver strategies are used, no categorical funding losses occur for schools during their experimentation, and that they be authorized to combine funds now separated by categories.

Important steps in this movement have begun to take place. Examples of such steps include: the recommendations made by the Offices of Special Education and Rehabilitative Services and Chapter 1 of the Office of Compensatory Education Programs (Will & LeTendre, 1987); the dialogue fueled by the joint position statement of the National Association of School Psychologists and the National Coalition of Advocates for Students (1986); the recommendation by the Commission on Chapter 1 (1992) to provide coordinated in-class programs (in opposition to the predominant "pull-out" approach to Chapter 1 implementation) through legislation and an "openness" to innovation at the school level; and the recommendations by the study group of the National Association of State Boards of Education (1992) that

"State Boards should ensure that . . . students are not labeled . . . with a disability category in order to receive services" (p. 37).

In all of these changes, attention should be given to features of instruction that work and are aspects of a totally inclusive school system. The burden for such changes falls not only on specialists but on all educators, parents, and members of the community who are in positions to be supportive. What we face is not a simple change. To be sure, progress has been made--nearly all children are in school, and the main obstacles remaining are details of arrangements within schools. Educators who concede to separateness of categorical programs sometimes do so with relief and will likely oppose the changes we urge. Some educators are comfortable in their present positions and feel threatened by change. But as emphasized by the special study group of the National Association of State Boards of Education (1992), it is time for broad revisions of categorical programs and for "Emphasis . . . on improved instruction rather than the processes of classifying and labeling students" (p. 4).

Teacher Education

In a period of rapid change in the structure of school programs, the institutions involved in preparing teachers face a difficult problem. They must prepare teachers to be qualified for state certification and the realities of employment, while also recognizing and sometimes leading processes of change. Ideally, changes in schools, colleges, and state licensing agencies should all take place in approximately parallel fashion; one cannot afford to get far ahead of the others. In the wise words of the late Al Smith: "If you want to lead a parade, don't get more than two blocks ahead."

It is clearly necessary for universities to merge their programs in categorical areas and general education. Since there is no separate and distinct knowledge base for the teaching of any skill or subject to children in Chapter 1 programs, or those labeled learning disabled or educable mentally retarded, teacher preparation programs should be restructured into a comprehensive program of "what works" to

ensure educational outcomes of the increasingly diverse students schools today and in the 21st Century are challenged to serve.

Faculty in special education will be able to provide components in unified programs that represent their expertise, including working with parents and paraprofessionals; utilizing strategies such as cooperative grouping and direct instruction in one-on-one and small group situations; and teaching social skills (Reynolds, 1991). Similarly, regular education faculty with different backgrounds or experience will be able to add valuable ideas and practices.

A Scenario of an Inclusive Education System

In a related article, we have considered what education might be like in the year 2000 if educators improved in several key areas (Wang, Walberg, & Reynolds, 1992). The following scenarios are not predictions but descriptions of programs and practices that could better serve all students, including those with special needs, in an inclusive education system.

Instructional Teams. In the year 2000, increasing numbers of special education teachers work directly with teams of teachers in various regular instructional environments. Regular education programs are far different from the one teacher/one class operations of the past. In general, special education teachers provide instruction to students showing the least progress through small groups or one-on-one teaching as part of the regular class operation. They also help modify programs for those who learn most rapidly. They carry relatively heavy loads in pupil assessment programs and in reporting to and collaborating with parents.

Effective Instructional Strategies. Students with special needs, along with all others, benefit in the year 2000 from application of effective educational practices (none of which are fully implemented today). Few of the practices are new; they represent, in many instances, traditional--and even ancient--wisdom about effective education. For example, both regular and special-needs students benefit from increases in time spent in well-designed learning activities; parental involvement in the learning process;

suitability of substantive difficulty levels for individual learners; and constructive classroom and school climates. Furthermore, instruction for all students has the following features: instruction based on student achievement needs; materials and procedures allowing students to proceed at their own pace; frequent assessment of progress; additional time available for students who need it; students' shared responsibility for monitoring and guiding their own learning; and students helping one another and cooperating in achieving learning goals.

Child Study and Classification. Concerns about children with special needs focus mainly on the necessary modification of instructional programs. Children are not labeled, although programs may be. It is common, for example, for selected children in the primary grades to receive extended intensive reading instruction; others receive extended instruction in social and friendship skills. Children with particularly poor vision are taught to read by Braille methods. Again, while these adaptive programs may have labels, children will not. Planning for pupils is done strictly in terms of instructional needs and is revised frequently.

Monitoring of Students. The school staff regularly monitors the progress of all students; for those showing most and least progress, there are intensive efforts to seek improvements. Students are identified in terms of their progress toward important school goals and objectives, not labeled or classified in traditional special education style. High-achieving students are identified on the assumption that they also need adaptive school programs to continue learning at high rates.

Meeting the Diverse Needs of Students. Students formerly labeled learning disabled progress in regular classrooms through intensive tutoring, supplemented by help from computer hookups at home and school. A reasonably priced home terminal and modem allow each child to be tutored by a sophisticated computer in the afternoons, evenings, and summers. While it is possible to do much schoolwork at home, most students prefer to do the majority of their work in school because they want the companionship and stimulation of classmates and teachers.

Coordinated Teacher Preparation. Colleges and universities disband separate programs for preparation of regular teachers and most "special" teachers, such as those who serve learning disabled and educable mentally retarded children. University students who prepare for general teaching take courses that expand their resourcefulness as teachers of exceptional students. Most trainees are expected to be employed in regular classrooms, but also to act as team members with the teachers who work mainly with students needing extra help.

School Coordination with Welfare and Health Agencies. Schools are linked with their county departments of children's services, mental health, and social welfare. The school and county agencies agree to exchange information and create common service eligibility procedures. Counties place several professional workers at school sites to provide health services and coordinate welfare services. County and state officials grant the necessary waivers to facilitate a coordinated pattern of services both within the school and in the broader community.

Coordination of Government Offices and Programs. Federal and state officials heading categorical programs meet regularly to improve coordination of programs and to consider requests for waivers to permit coordination of programs at the school level. This results in more coherent programs in the schools, which thus serve all students more effectively. Schools are not penalized in any way for experimenting with programs. Members of Congress, updated on efforts to better coordinate programs, express readiness to support legislation that would provide more coherent programs for students with special needs and their families.

CONCLUSION

Children are not "carved by nature" into the categories now used in schools. The fact that a subgroup of children can be classified by characteristics (such as economic disadvantage, parental occupation, ethnicity, disability, or even similar test scores) is irrelevant for educational purposes unless

there is evidence that such classifications and placements will lead to better instruction and improved learning. We believe that educators have taken a basically flawed course in organizing an excess of categorical school programs. Accordingly, there is urgent need to reform the schools to break the cycle of reliance on categorical programs.

The needed revisions will be complex politically, economically, and professionally. Nonetheless, we must ask: Why continue the current approach to classification and placement of students requiring greater-than-usual educational and related services support since it is not working? Should the field continue preparing psychologists to make classification distinctions lacking demonstrated merit for improving student learning? Should universities continue to prepare teachers separately by category when research and practical experience consistently show that the distinctions are mere frostwork? Should we continue practices that promote disjointed programming that has not proven productive for students?

Many children currently being served in second-system programs, and many others, have real learning problems that must be acknowledged and dealt with in a realistic fashion. But the manner in which we so often partition the children, teachers, and programs to deal with these problems is essentially flawed. Children who need to be served with the highest quality educational experience are too often labelled negatively and then set aside in educationally impoverished and unevaluated programs.

Are there well-tested ideas and practices that could be used as the basis for increased educational effectiveness? The answer is definitely yes. The state of the art far outpaces the state of actual practice in the schools. The scenario of practice in an inclusive education system, as described above, emerged from a broad review of research and current practice. But while the findings are impressive, much remains to be investigated, understood, and improved. The challenge is to improve current practices using the best of what we currently know as we continue to seek theoretical and practical advances that serve to promote the learning of all children.

We believe that reframing the entire set of categorical programs is necessary, from legislative and regulatory levels to classrooms and individual students. These changes will not be easy, but we believe it is extremely important that schools put their programs together in coherent fashion as well as reach out to parents and community and other service agencies to achieve broader improvements in the life situations and constructive learning opportunities of all children, particularly those whose present situations are most adverse.

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Table 1

Twenty-Eight Categories of Influence on School Learning

Category/Subcategory	Illustrative Variable
Category I. Student Characteristics includes gender; academic history; and a variety of social, behavioral, motivational, cognitive, and affective characteristics.	
1. Metacognitive Processes	Comprehension monitoring (planning; monitoring effectiveness of attempted actions and outcomes of actions; testing, revising, and evaluating learning strategies)
2. Cognitive Processes	Level of specific academic knowledge in subject area instructed
3. Social and Behavioral Attributes	Positive, nondisruptive behavior
4. Motivational and Affective Attributes	Attitude toward subject matter instructed
5. Psychomotor Skills	Psychomotor skills specific to area instructed
6. Student Demographics	Gender and socioeconomic status
Category II. Classroom Instruction and Climate includes classroom routines and practices, characteristics of instruction as delivered, classroom management, monitoring of student progress, quality and quantity of instruction provided, student/teacher interactions, and classroom atmosphere.	
7. Classroom Management	Group alerting (teacher uses questioning/recitation strategies that maintain active participation by all students)
8. Student and Teacher Social Interaction	Student responds positively to questions from teacher and other students
9. Quantity of Instruction	Active engagement in learning
10. Classroom Climate	Cohesiveness (class members are friends sharing common interests and values and emphasizing cooperative goals)
11. Student and Teacher Academic Interaction	Frequent calls for extended, substantive oral and written response (not one-word answers)
12. Classroom Assessment	Use of assessment as a frequent, integral component of instruction
13. Classroom Instruction	Use of clear and organized direct instruction
14. Classroom Implementation and Support	Establishing efficient classroom routines and communicating rules and procedures
Category III. Out-of-School Contextual Variables includes community demographics, peer culture, parental support and involvement, and the amount of time students spend out of class on activities such as television viewing, leisure reading, and homework.	
15. Home Environment/Parental Support	Parental involvement in ensuring completion of homework

Table 1 (cont'd)

Twenty-Eight Categories of Influence on School Learning

Category/Subcategory	Illustrative Variable
16. Peer Group	Level of peers' academic aspirations
17. Community Influences	Socioeconomic level of community
18. Out-of-Class Time	Student participation in clubs and extracurricular school activities
Category IV. Program Design refers to the physical and organizational arrangements for instructional delivery, and includes strategies specified by the curriculum and characteristics of instructional materials.	
19. Curriculum Design	Instructional materials employ advance organizers
20. Program Demographics	Size of instructional group (whole class, small group, one-on-one instruction)
21. Curriculum and Instruction	Alignment among goals, content, instruction, student assignments, and evaluation
Category V. School Organization refers to culture, climate, policies, and practices, and includes demographics of the student body, whether the school is public or private, funding for categorical programs, school-level decision-making variables, and school-level policies and practices.	
22. School Culture	Schoolwide emphasis on and recognition of academic achievement
23. Teacher/Administrator Decision Making	Principal actively concerned with instructional program
24. Parental Involvement Policy	Parental involvement in improvement and operation of instructional programs
25. School Demographics	Size of school
26. School Policies	Explicit schoolwide discipline policy
Category VI. State and District Characteristics refers to governance and administration, state curriculum and textbook policies, testing and graduation requirements, teacher licensure, provisions in teacher contracts, and district-level administrative and fiscal variables.	
27. State-Level Policies	Teacher licensure requirements
28. District Demographics	School district size

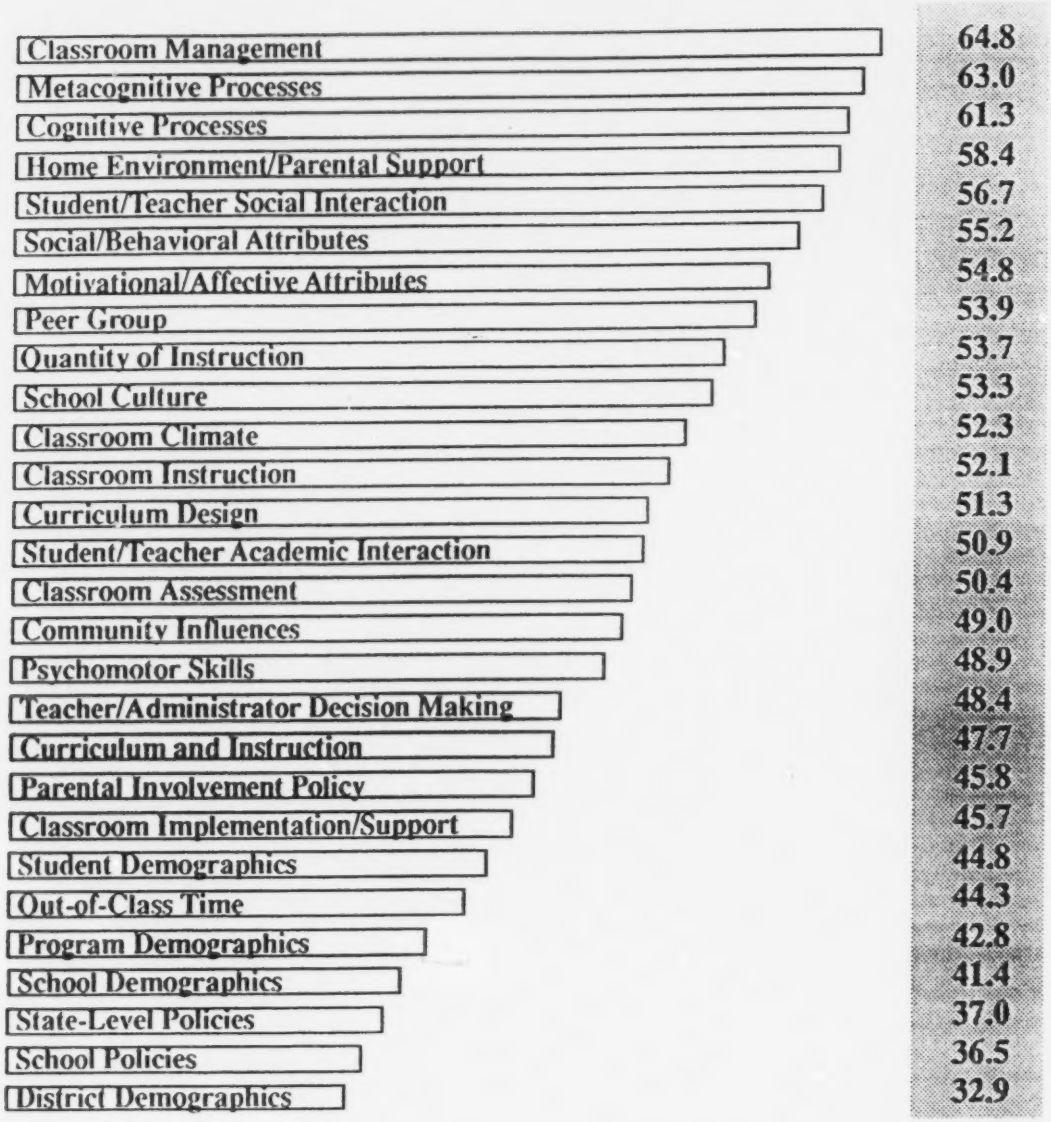

Figure 1. Relative Influences on Learning of 28 Subcategories of Variables.

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Table 2

45 Variables with the Highest Mean Ratings (2.7 or Higher) Determined by a Survey of Expert Opinions on What Influences Learning (N=992 Respondents)

Variable	Mean Rating (Scale of 3.0)
Category I: Student Characteristics	
Positive, nondisruptive behavior	2.8
Attitude toward school	2.8
Motivation for continual learning	2.8
Self-confidence	2.8
Level of reading comprehension ability	2.8
Self-regulatory, self-control strategies	2.8
Appropriate activity level	2.7
Cooperativeness with teacher	2.7
Attitude toward teachers	2.7
Attitude toward subject matter instructed	2.7
Perseverance on learning tasks	2.7
Level of listening skills	2.7
Positive strategies for coping with failure	2.7
Category II: Classroom Instruction and Climate Variables	
Teacher enthusiasm about the content	2.8
Frequent feedback to students about their performance	2.8
Teaching for meaningful understanding	2.8
Time on task (amount of time students are actively engaged in learning)	2.8
Organization (class is well organized and planned)	2.8
Establishment of efficient classroom routines and communication rules and procedures	2.7
Use of clear and organized direct instruction	2.7
Setting and maintenance of clear expectations of content mastery	2.7
Corrective feedback in the event of student error	2.7
Skills taught within the context of meaningful application	2.7
Use of good examples and analogies to concretize the abstract and familiarize the storage	2.7
Time spent in direct instruction on basic skills in reading	2.7
Time spent in direct instruction on basic skills in mathematics	2.7
Learner accountability (teacher maintains student awareness of learning goals and expectations)	2.7
Teacher "with-itness" (teacher is continually aware of events and activities and minimizes disruptiveness by timely and nonconfrontational actions)	2.7
Appropriate teacher reaction to correct and incorrect answers	2.7
Positive reinforcement of social interactions with students rejected by peers	2.7
Task difficulty (students are continually and appropriately challenged)	2.7
Low apathy (class members are concerned and interested in what goes on in the class)	2.7
Category III: Out-of-School Contextual Variables	
Parent involvement in ensuring regular school attendance	2.8
Parental interest in student's schoolwork	2.8
Parental expectation for academic success	2.8
Educational environment	2.7
Parental involvement in ensuring completion of homework	2.7
Parental application of appropriate, consistent discipline	2.7
Parental expression of attention to children	2.7
Category IV: Program Design	
Clearly presented academic, social, and attitudinal program goals/outcomes	2.7
Availability of materials and activities for students with different abilities	2.7
Category V: School Organization	
Teacher involvement in finding ways to increase academic performance	2.8
Teacher involvement in instructional decision making	2.7
Active collaboration between regular classroom teachers and special education teachers	2.7
Safe, orderly school climate	2.7

Note: No variables under Category VI, State and District Characteristics, received a rating of 2.7 or higher.

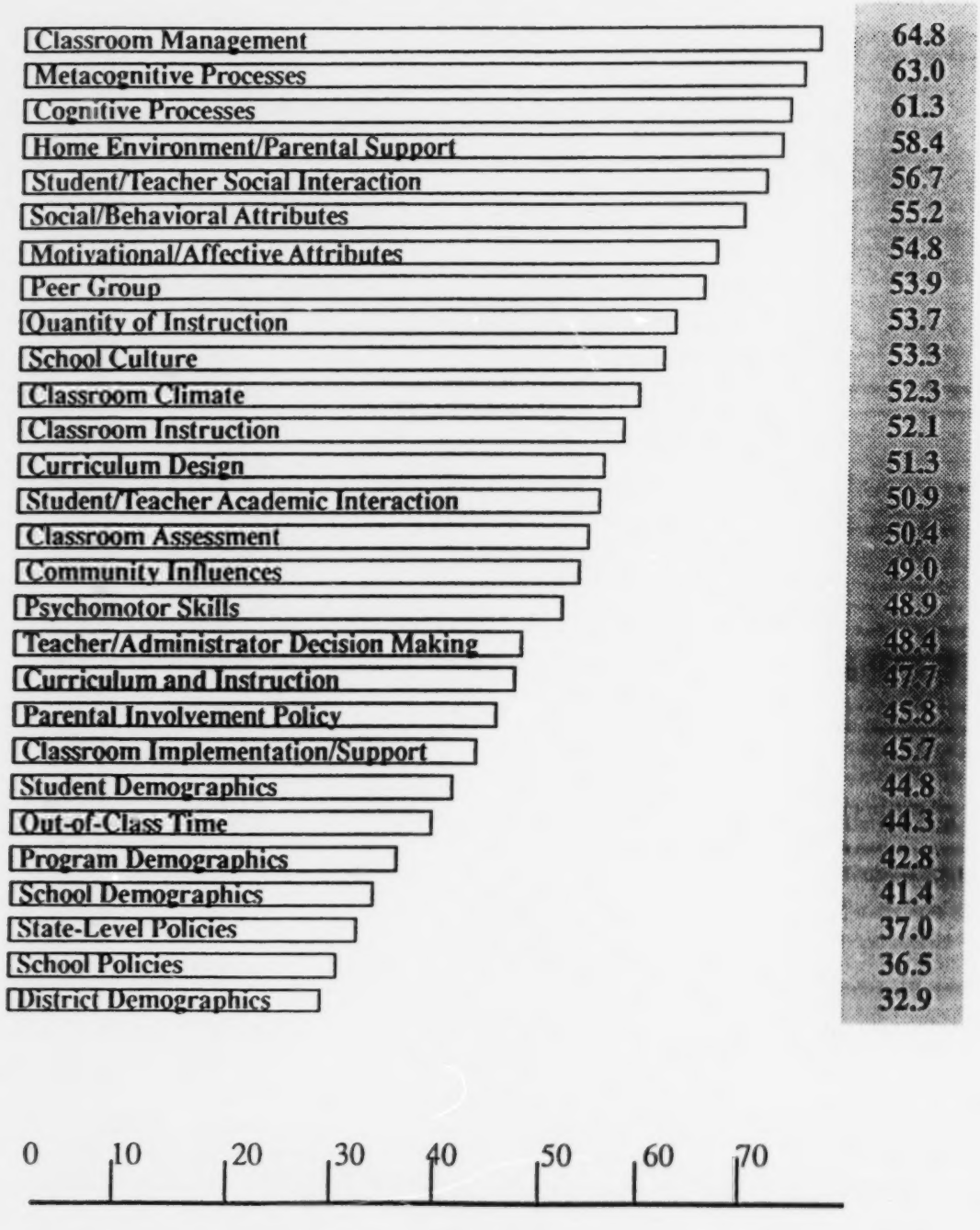

Figure 1. Relative Influences on Learning of 28 Subcategories of Variables.

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The National Center on Education in the Inner Cities

The National Center on Education in the Inner Cities (CEIC) was established on November 1, 1990 by the Temple University Center for Research in Human Development and Education (CRHDE) in collaboration with the University of Illinois at Chicago and the University of Houston. CEIC is guided by a mission to conduct a program of research and development that seeks to improve the capacity for education in the inner cities.

A major premise of the work of CEIC is that the challenges facing today's children, youth, and families stem from a variety of political and health pressures; their solutions are by nature complex and require long-term programs of study that apply knowledge and expertise from many disciplines and professions. While not forgetting for a moment the risks, complexity, and history of the urban plight, CEIC aims to build on the resilience and "positives" of inner-city life in a program of research and development that takes bold steps to address the question, "What conditions are required to cause massive improvements in the learning and achievement of children and youth in this nation's inner cities?" This question provides the framework for the intersection of various CEIC projects/studies into a coherent program of research and development.

Grounded in theory, research, and practical know-how, the interdisciplinary teams of CEIC researchers engage in studies of exemplary practices as well as primary research that includes longitudinal studies and field-based experiments. CEIC is organized into four programs: three research and development programs and a program for dissemination and utilization. The first research and development program focuses on the *family* as an agent in the education process; the second concentrates on the *school* and factors that foster student resilience and learning success; the third addresses the *community* and its relevance to improving educational outcomes in inner cities. The focus of the *dissemination and utilization* program is not only to increase awareness of the issues CEIC is researching, but, more importantly, to ensure that CEIC's findings are known and used to ensure the educational success of inner-city children, youth, and families.

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